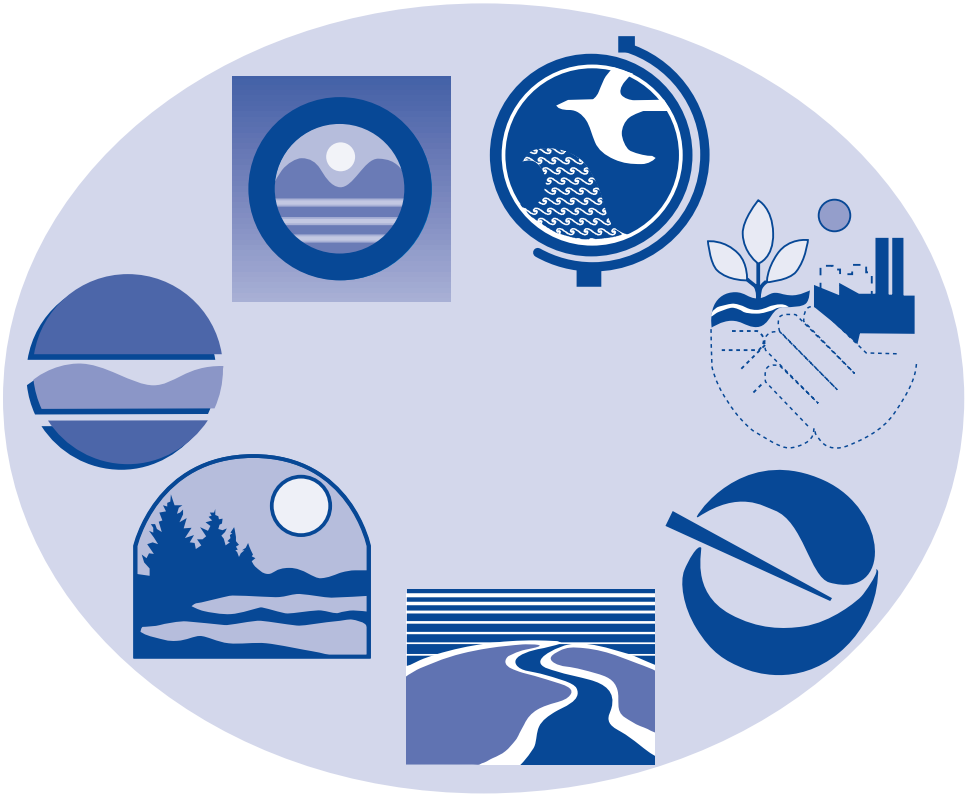
Tier I Guidance

Environmental Technology Acceptance and Reciprocity Partnership



December 2000

Prepared by
Member States of the Six-State Memorandum of Understanding

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Supported by
Environmental Council of States and
Interstate Technology & Regulatory Cooperation Work Group

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I. Background

On June 4, 1996 the heads of the state environmental agencies in California, Illinois, Massachusetts, New Jersey and Pennsylvania signed a memorandum of understanding (MOU) to define a process for the reciprocal evaluation, acceptance and approval of environmental technologies among the six states. According to the six-state reciprocate MOU, the process would enable participating states to consider data, evaluations, verifications, certifications, approvals and permits from another participating state as if they had been produced in their respective states.

To implement the reciprocity MOU, the six sates selected eleven sample technologies for a pilot project evaluation of this process. The sample technologies included at least one technology of particular interest to each state and represent a full range of environmental technologies for pollution prevention, measurement and monitoring, treatment and control and remediation. The results of the pilot project are detailed in the six-state MOU pilot project strategies report: Reciprocal State Acceptance of Environmental Technologies, October 1998. Through the pilot project, the six states identified common data evaluation; performance testing and regulatory review protocols for the pilot technologies and defined the most efficient acceptance and approval process for each technology class.

The six states have now used the results of the pilot project to develop guidance for the use of technology developers, vendors, users and other states. This guidance will be presented in a three tiered process. First providing general guidance on data collection and evaluation (Tier 1) and eventually providing technology specific guidance for specific classes of technologies (Tier 2) followed by guidance for permitting and approvals of certain technologies (Tier 3).

This document is not designed to be replacement for a site specific permit but could result in regulatory changes that could form the basis for establishing conditional exemptions, general permits, waivers, variances or the basis and background for regulatory revisions based upon the technology's acceptance in one state.

Using the tier guidance document will:

- Reduce duplicative demonstration and testing of technologies
- Expedite multi-sate technology acceptance
- Reduce cost for both vendors and state regulators

II. Introduction

This document represents the first tier of the three tiered guidance document developed under the six-state MOU pilot project.

The goal of the Tier 1 document is to:

- Provide vendor guidance for development of credible data pertaining to all environmental technology classes through a general and consistent protocol for performing and evaluating full-scale field demonstrations.

- Establish an integrated protocol for consistent reviews and evaluation between states. The objective is to establish a pathway for interstate reciprocity of technology acceptance.

The two remaining tiers of this process will:

- Provide additional guidance for comprehensive performance testing for specific technology classes in the areas of pollution prevention/recycling, site remediation/treatment, measurement & monitoring and treatment and control technologies. This process will include a coordination of standards and technology specific data collection and evaluation procedures through a common shared database format. (Tier II)

- Provide vendors and state permits writers with regulatory and technical guidance for permitting or approval of specific technologies. This process will include a permit template that can be adopted by participating states within a common shared database format. (Tier III)

- The overall process for technology acceptance evaluation and interstate reciprocity is tested in the flow chart in Appendix A.

III. Definitions – (used within the context of this Guidance Document)

1. "Environmental technology" means a new, innovative or alternative method, procedure, process, system or facility, which is not a proven technology. An environmental technology could include a proven technology in one field of use that is applied to a new or different environmental problem. The environmental technololgy must have a substantial likelihood of achieving greater continuous environmental protection than other technologies in current practices or at least comparable results at lower cost in terms of energy, economics or environmental impacts.

2. "Proven Technology" means a method, procedure, process, system or facility for pollution prevention, pollution control, site assessment and remediation, data management systems or control or environmental management practices which has been permitted and has a substantial operational record.

3. "Net Beneficial Effect" means that the sum total of the overall environmental impacts of the environmental technology is less than the existing or baseline conditions in which the environmental technology is being introduced or used. The overall environmental technology in terms of inputs of raw materials, water, and energy usage and the outputs of air emissions, wastewater discharges, solid waste residue including any recycling and product, must result in a significant reduction of the impacts to the environment when compared to the baseline conditions for the same or equivalent inputs and outputs. The net beneficial effect should not result in an excedance of any existing state-of-the-art emissions or discharges. The "net beneficial effect" should enhance environmental performance producing a more efficient less polluting outcome beyond compliance regulation.

4. "Class of environmental technology" means the type of pollution prevention, pollution control, site assessment and remediation, data management system or control, or environmental management practices. A class of environmental technology could include the following:

    a. “Environmental Monitoring Technology” means any method, procedure or process for evaluating or determining environmental data conditions or results.

    b. “Recycling" means any method, process, system or facility for the recovery and reuse of material that would otherwise become a waste and is returned as a raw material or product.

    c. Pollution Prevention Technology means one method or process for the reduction of the use of hazardous substance or other substances of concern in the production and manufacturing process or the prevention of an emission, discharge and/or residue from being generated by a system or facility.

d. Environmental Control Technology" means any method, process or system to reduce or control emissions/or discharges from a facility.

e. "Remediation Technology" means any method, process, system or facility to recover and control contamination in soil and/or groundwater at a site.

5. "Stage of environmental technology Development" means the common cycle of environmental technology development including the following.

   a. "Treatability, pilot or bench scale study" means a procedure to test the environmental technology under laboratory conditions.

   b. "Full-scale field demonstration" means a process to test the environmental technology to obtain performance data under field operating conditions.

   c. "Start-up/compliance testing" means the ongoing testing of the environmental technology's ability to meet performance standards at the site where it will be deployed.

6. "Performance data" means any parameter or piece of information collected or produced from measurements, analyses or models of environmental processes, conditions and effects of constituents of concerns on human health and the environment including results from laboratory analyses, demonstration or pilots and the work performed to obtain use or report information pertaining to process method procedure, equipment, system or facility.

7. "Verify" means to confirm by evaluation and assessment that the validated data or performance meets specific requirements under specific conditions through the host State demonstration process.

8. "Validate" means to confirm by evaluation and assessment that a particular requirement for a specific intended use is met.

9. "Quality Assurance" (QA) means an integrated system of management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected by the client.

10. "Quality Control" (QC) means the overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established by the customer; operational techniques and activities that are used to fulfill requirements for quality.

11. "Reciprocity" means that the environmental technology data and technology performance is acceptable between states without further demonstrations. Further, when required it means that a Tier III protocol has been establish for use as a regulatory or permit template between states.

12. “Host State” means the state environmental agency in which the environmental technology is first being demonstrated and/or verified/certified.

IV. General Guidance for Tier I Pathway

The information described in this section is general guidance and may not be applicable for all environmental technology demonstrations and evaluations. Application of the scope of the guidance should be tailored to the scope of the environmental technology's benefits and impacts. Non-applicable areas should be documented

The environmental technology request for a full-scale field demonstration and evaluation for technology acceptance should include the following:

1. Goals and objectives of the environmental technology performance demonstration/pilot project.
2. Technology description
3. Site description
4. Supporting technical, scientific and engineering data and information
5. Operational conditions and parameters
6. Health and safety plan
7. Sampling plan
8. Analytical plan
9. QA/QC plan
10. Data management

1. Goals and Objectives

The goals of the field demonstration should be clearly and concisely defined. The goals should be specific and be described in quantitative terms to the extent possible. The goals should establish what the demonstration would be sampling and analyzing, the data that will be generated, how it will be evaluated and the performance of the technology to be evaluated.

The objective of the field demonstration should be clearly stated which may include but not limited to the following:

i. To verify/certify a set of environmental and operational data of the technology to meet a regulatory standard;
ii. To verify/certify the overall environmental performance of the technology to meet a regulatory standards;
iii. To demonstrate the cost effectiveness of the technology;
iv. To establish an approval/permitting protocol, or
v. To develop a reciprocity pathway for interstate acceptance of the technology.

2. Technology Description

The overall technology system should be described including all components and process Units. This should include a discussion of the quality systems used in the manufacturing, use, and monitoring systems of the technology. The process capabilities, in appropriate units, and the emission and discharges rates should be described. A process flow diagram for the system and individual units should be included.

The status of the development and commercialization of the technology should be described in the following general terms:

1. Pilot or bench scale
2. Treatability studies
3. In-house validation studies
4. Full-scale field demonstration

The description of the technology should include a full discussion of the environmental benefit to all media, as well as the environmental impacts to all media including; soils, groundwater, surface water, wastewater, air and sludge/residue. The discussion should include, as appropriate the multimedia impacts and the transfer between and to other media. This discussion should include materials and energy flow diagrams, and the associated mass balance of materials and energy.

The discussion of technology should include the full range (minimum, maximum and optimal) of conditions under which the technology will operate. This should include the mass loading, concentrations and environmental conditions for the full range under which technology will be operated. The performance and reliability (on-line availability) of the technology over the ranges of operations, as well as potential excursion should be discussed. This section should include the environmental requirements and limitations of the technology. The outer boundary conditions of the operation for the demonstration should be described.

The discussion should include the physical construction of the unit and components. This may include documentation that the units/system was constructed in accordance with ISO 9000 standards for the manufacturing of the units. However, the assessment of the integrity of the unit is beyond the scope of the demonstration.

The discussion should include the processing or treatment in terms of the characteristics of the media, the conversion process and the resultant outputs.

A list of patents (either secured or applied) and/or license, franchise or other agreement as applicable associated with the operations and use of the technology or components should be provided.

3. Site Description

This section should discuss the history and ownership of the demonstration site, processes and facilities as applicable. The description should include a key map and site plan map. The format for these maps should be GIS compatible as appropriate. The description and map should include a discussion of the adjourning properties and nearest residential and environmentally sensitive areas. Further, as applicable, this should include a description of the geology and hydrogeology soils types and surface hydraulics at the site.

This section should include, as applicable, the range of concentrations, mass loadings for each contaminate present at the site and the media physical/chemical description.

4. Supporting Data and Information

This section should provide the scientific, engineering and technical principles underlying the technology and how they affect the performance and reliability. The discussion should include how these principles are or will be protective of public health and the environment.

The documents should be peer-reviewed scientific or technical journals, textbooks, and/or patent information or equivalent documentation. This section should not include the marketing literature. This documentation may also include applicable regulations and standards.

5. Operational Conditions

This section should describe the range of operating conditions in terms of loading rates and concentrations, as applicable. The maximum and minimum rate, as well as the optimum operating rates and conditions should be detailed. This discussion should describe how changes in operating conditions within ranges (including excursions) may impact on performance reliability and protectiveness. As applicable, documentation of the operating and maintenance procedures should be summarized.

This section should include a listing of operator requirements for education, training, experience and any required licenses to operate the technology. Further it should describe the monitoring of the technology, the environment control mechanisms (air emission, wastewater discharges and residues) to determine acceptance and safe performance as well as unacceptable and system upset conditions.

6. Health and Safety Plan

As applicable, a Health and Safety Plan (HSP) shall be prepared, which should be consistent with existing regulatory standards. This section should include an assessment of hazards, risk and accident potential. Further, it should detail how to respond to malfunctions, spills or other problems. This section should detail any required training to operate the technology in regard to the HSP.

7. Sampling Plan

The sampling plan should describe the procedures that will be used to obtain samples. If available a state and/or federal generated SOP (such as SW 846) or other acceptable protocol such as ASTM or Standard Methods for the sampling activity should be described. The sampling plan should ensure the consistency and integrity of the sampling to meet the data quality objectives including the following:

1. The description of the sampling plan should include depth and location within ranges.

2. The sampling equipment or instrumentation should be described in terms of physical and chemical comparability with the sampled media and constituents to be sampled.

3. The sampling should ensure that sufficient number, volume and quantity is collected to meet the analytical and data quality requirements.

4. The physical requirements and operator requirements should be described.

5. A detailed description of potential cross contamination potential and decontamination process.

6. A description of the documentation of field activities which should include.

    a. field log documentation
    b. sample preparation procedure
    c. sample location
    d. field SOP
    e. storage and holding times
    f. chain of custody

8. Analytical Plan

The analytical plan should describe the procedures that will be used to test the samples collected. A state or federally generated protocol (such as SW 846) or other acceptable protocol such as Standard Methods for the analytical activity should be described. If an acceptable protocol is not previously defined for the test method the newly developed SOP should be submitted. Methods validation should follow appropriate EPA guidance for streamlining test methods. The analytical plan should ensure the consistency and integrity of the testing to meet the data quality objectives.

A matrix of the analytical technique and procedures shall be described.

A description that the laboratory is in compliance with ISO Guide 25, NELAC standards, a state and/or federally certified lab under a laboratory accreditation program or other accrediting body.

The laboratory should be independent of the environmental technology.

9. QA/QC Plan

The QA/QC plan should describe the procedure that will be used to ensure data quality and integrity.

Data decision rules should be developed for each objective for which the environmental technology is being evaluated. The data decision rules should be described in "if ..... then" statements. Acceptable decision errors should be described and estimated.

The QA/QC plan should detail the following quality parameters

a. Representativeness: The samples are a reasonable gross-section of the "population" over which the environmental technology is being evaluated.
b. Comparability: The data are comparable to a reference or baseline method for the demonstration.
c. Completeness: The measure of the percent of data collected compared to the amount that was expected or the proportion of valid acceptable data that is generated.
d. Accuracy: The measure of how close in average the values are to the true value.
e. Precision: The degree of mutual agreement among individual measurements of the same material and/or constituent.

The QA/QC plan should describe the calibration procedures and QC checks for the technology and laboratory testing including initial calibration procedures, continuing calibration procedures, method blanks, spike samples, laboratory control samples, performance evaluation methods and duplicate samples.

10. Data Management

The data quality plan should describe the procedures that will be used to be followed during data reduction, validation and reporting. This section should describe the statistical procedures that will be used to evaluate and to report the data.

Additional guidance for full scale field demonstration and evaluation for technology acceptance may be required as listed in the Tier II guidance for a specific class of environmental technology within a specific media and/or program area. Tier II guidance will list the range of similar or equivalent requirements between states. It will list the specific and additional requirements that individual states may require above the typical range. Further, it will list the decision-making process/criteria, as applicable for a specific class of environmental technology.

V. Data Collection and Quality Assurance Project Plan

The key to the Interstate Reciprocity for Technology Acceptance is the quality of the data and the environmental technology's overall performance. Verification of the data and performance and access to the interstate reciprocity pathway depends on the method and manner in which the data were collected and the performance was tested. The purpose of this section is to provide guidance in the establishment of the data collection and quality assurance project planning. The data acceptance of an environmental technology performance test requires that the environmental technology data and claims be based on sound scientific and engineering principles. That data and information must be documented by the environmental technology in an objective and impartial manner and be of sufficient quality to make a sound evaluation of the performance. It is essential that the data be generated by a third party independent source not an in-house lab. In-house laboratory or bench scale data can support the performance demonstration.

It is not possible to provide a strict format or form for each environmental technology to submit data. It is the environmental technology's primary responsibility to assure that the data and environmental performance claims are performed in a manner that is consistent with overall tiered approach goals and objectives of the Interstate Reciprocity for Technology Acceptance and provide data that is of sufficient quality and accuracy. This section establishes the major areas that will be evaluated by the states as part of the overall acceptance and reciprocity process:

1. All testing, sampling analysis and data collection should have clearly defined quality objectives (DQO) which are based on scientific principles;

2. The technology performance claims should describe how and under what conditions the claims are valid, and the testing methodology used to measure these claims;

3. The baseline conditions for the technology performance should be described and the change or impacts in this baseline should be detailed; and

4. All data and technology performance evaluation should be of sufficient quality and documentation that the testing was performed with verifiable procedures and methods to support the data and technology performance.

5. The data should document the full range of operational conditions at minimal, average and maximum loading rates.

6. The data should clearly document the boundary condition where the environmental technology can not operate and under what conditions this would occur.

A test plan and quality assurance project plan, at a minimum, should include the following main elements:

1. Management system for overall quality assurance and quality control;

2. Overall quality system for data collection;
3. Personnel trained in quality assurance and quality control;
4. Assessment of quality of services;
5. Record keeping;
6. Planning/Implementation/Assessment/Improvement plan.

This section provides guidance as to the evaluation and review to be performed by the State, third party verification entity or federal agency.

1. Management Systems

   As part of the data verification and technology evaluation, the individual state environmental department will review the management system that was established to collect the data and measure performance. The state will review the overall policies and procedures in place to achieve and ensure the quality and independence of the data collection and technology performance.

2. Overall Quality System--Data Collection

   The data collection and performance evaluation should demonstrate the chain of command that was in place during data collection. This should describe when and how quality controls are to be applied to specific tasks, methods, procedures and/or tests.

3. Trained Professionals

   The data collection and quality assurance project plan should be planned and implemented by a level of trained personnel adequate to perform the work based on project-specific requirements. Qualifications of individuals performing the work should be documented.

4. Quality of Services

   The items procured to construct and monitor the environmental technology should be documented to be of acceptable performance. The documentation should include a discussion of the inspection of the items and services received.

5. Record keeping

   Sufficient record keeping should be documented to reflect the quality of the work completed and to meet minimum regulatory requirements.

6. Planning/Implementation

   The data collection of the environmental technology should be performed in accordance with an established QA project plan, which outlines the goals of the work to be completed. The QA project plan should be implemented in accordance with the standard operating procedures detailed in the plan. These procedures should be documented to be reviewed and where necessary, revised. Any revision or modification should be adequately described and detailed as to the rational for the revision.

Data collected in this process should be assessed and qualified according to their intended use. Any limitations on the intended use should be expressed and documented. Any unqualified data from other sources should be documented.

The following are references that may be consulted in the preparation of a sampling/testing plan and the QA/QC project plan.

1. United States Environmental Protection Agency (USEPA) Office of Research and Development, Preparation Aids for the Development of Category I, II, IV or IV Quality Assurance Project Plan, EPA/600/8-91/004 Feb. 1991

2. American Society for Quality Control (ASQC) Energy and Environmental Quality Division, Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental technology Programs ANSI/ASQC E4 - 1994, January 1994

3. United States Environmental Protection Agency (USEPA) Guidance for the Preparation of Standard Operating Procedures (SOPs) for Quality Related Documents, EPA/600/R-96/027. Washington DC: U.S.

4. United States Environmental Protection Agency (USEPA) Guidance for Quality Assurance Plans, EPA QA/G-5, 1998.

5. United States Environmental Protection Agency Guidance for the Data Quality Objectives Process, EPA QA/G-4, EPA/600/R-96/055. 1994

6. United States Environmental Protection Agency Guidance for Data Quality Assessment, EPA QA/G-9, EPA/600/R-96/084. 1996

7. United States Environmental Protection Agency Office of Research and Development. Environmental Technology Verification Program Verification Strategy. EPA/600/K-93/003. 1997

APPENDIX A

(Optional) Establish a Baseline for Interstate Reciprocity for Technology Acceptance

The following is optional guidance for states that may want to establish a baseline screening step.

The baseline screening can be used to determine the current level or stage of development of the environmental technology and where the environmental technology is within the interstate reciprocity for technology acceptance process. Additional information may be needed to complete the evaluation, which may include an informal meeting between the environmental technology and the host state to discuss the concerns, limitations and issues of the reciprocity process. Any missing information/data would be identified by the host state, including the next action items and time frames for overall interstate reciprocity for technology acceptance of the environmental technology. The screening baseline should be developed based on lab scale pilots and/or previous full-scale field demonstration and general scientific or technical information on the environmental technology.

The screening baseline should provide the following general information about the environmental technology to the host state. Some questions may not be fully applicable or may need further demonstration to answer:

1. Is the environmental technology a proven technology?
2. What is the operational status and scale of the environmental technology?
3. Has the environmental technology generated validated and verifiable performance data?
4. What are the impacts and net beneficial effects of the environmental technology including a general materials and energy balance?
5. What are the general overall economic impacts including capital cost and O&M costs.
6. What control technologies are needed to mitigate environmental impacts of the environmental technology?
7. What is the overall performance claim of the environmental technology? What environmental impacts are or will be offset by the environmental technology?
8. Will the environmental technology generate a marketable product?
9. Can the environmental technology be permitted under existing State regulatory framework?

APPENDIX B

Guidance for Tier II and III Development

The following is only intended as general assistance for those states that have or will be assisting in developing Tier II or III protocols. This document will be updated in detail when the specific technology class Tier II and III guidance is developed. Currently, venders should contact the host state and discuss the project prior to submitting the information suggested in this report. The individual states goals, needs, laws and regulations may effect its ability to review the report or enter into an agreement or approval for a given technology.

B1. (Optional) Full-Scale Field Demonstration or Pilot Project for Interstate Reciprocity for Technology Acceptance

If it is determined that the environmental technology lacks acceptable verifiable data or has not generated acceptable performance because of the level of stage of the environmental technology, the host state may decide to the environmental technology in establishing a demonstration or pilot project to document the environmental technology's performance and to generate sufficient data of the environmental technology's performance. Since verifiable data and quality assured performance is the key to an environmental technology approval and subsequent interstate reciprocity for technology acceptance, the mechanism to generate that data is the common goal and is essential to the success of the environmental technology.

If the host state decides to proceed with a full-scale field demonstration or pilot project the performance agreement and or approval between the host state and the environmental technology for a demonstrated pilot and should include the following:

1. Goals and objectives for the environmental technology performance demonstrator/pilot project;

2. Testing and measurement of the performance of the environmental technology's overall quality assurance project plan consistent with Tier I and Tier II protocols for the class of environmental technology;

3. Data Collection Sampling/Testing Plan consistent with Tier I and Tier II protocols for the Class of environmental technology;

4. QA/QC plan consistent with Tier I and Tier II protocols for the Class of environmental technology;

5. The specific environmental performance criteria, environmental standards and requirements for all emissions, or discharges to air, water or soil end points.

6. The monitoring procedures consistent with Tier II protocols;

7. The reporting procedures consistent with Tier II protocols;

8. Construction requirements consistent with Tier II protocols;

9. Operational requirements consistent with Tier II protocols;

10. Schedule for the demonstration/pilot.

The agreement or approval, should include an evaluation of the results to make a decision on the acceptability of environmental technology performance for Interstate Reciprocity for Technology Acceptance as follows:

1. The procedure for completeness review;

2. How additional information will be requested;

3. How the environmental technology and host state will establish public input;

4. Review schedule;

5. Listing of potential outcomes;

6. General criteria for successful evaluation;

7. Environmental standards or state of the art determination for air, water or soil limits including evaluation and rating of risk for evaluation; and

8. Procedures for acceptance.

B2. Interstate Reciprocity for Technology Acceptance - Tier III Permit Template

The submittal of information meeting the Tier I and Tier II Guidance and an evaluation of the environmental technology by the host State, determines that verifiable data is available and of sufficient quality to validate the environmental technology's performance claims, the host state may proceed with acceptance of the environmental technology's environmental and operation data and the technology's performance for a specific set of constituents and conditions (boundary conditions or limits) for Interstate Reciprocity for Technology Acceptance. The environmental technology acceptance will establish the following as a Tier III protocol as a regulatory template for subsequent interstate permit/approvals as may needed:

1. Pre-start up testing/monitoring;
2. Start-up or compliance testing;
3. Construction performance;
4. Operational performance;
5. Monitoring or performance testing;
6. Record keeping;
7. QA/QC procedures;
8. Health and Safety plan performance.

The evaluation of the environmental technology environmental and operational data and the technology's performance should be based on the criteria.

B3. Criteria for Interstate Technology Acceptance Reciprocity

The key to interstate technology acceptance reciprocity is the completeness of the data package that demonstrates the environmental technology performance. If the environmental technology's is making a performance claim under specific conditions, the data review and evaluation should be demonstrated under that condition. The testing, sampling data and evaluation should be unbiased and objective. It should fully support all claims with substantive and significant data. The full range of operations of the environmental technology should be demonstrated including minimum average and maximum capacity and flow rates.

To be eligible for acceptance for interstate reciprocity an environmental technology must fully document the following:

1. Data on environmental performance must be validated and verified under the full range of operations;

2. The environmental technology limits including environmental and economic impacts of the environmental technology and the controls that are in place must be detailed;

3. The net beneficial effect must be fully documented.

1. Data verifiable by individual host states

   This means that the testing and sampling plan to generate the data was performed in accordance with acceptable methods and procedures; or where alternative methods were used, this variation is documented and limitations detailed. The data was collected in accordance with acceptable quality control and quality assurance in accordance with an established quality assurance project plan methods which should have been reviewed and found acceptable to the host state. The full range of operations were demonstrated, including under low, average, and maximum

conditions. This should be sufficient to document the areas where the environmental technology can function and the outside limits of the environmental technology.

2. Limits of the environmental technology

   This means the emissions and discharges under the full range of operation are or are likely to be within acceptable limits with controls, as documented, through a demonstration or pilot project. The evaluation of the environmental technology performance is confirmed to a set of requirements and an objective examination of the performance has been completed to document the statistical significance of the data and the environmental technology's performance.

3. The net beneficial effect is verifiable by the host state?

   This means that the mass balance of the inputs and outputs of the environmental technology are significantly better than those of existing technologies in baseline conditions as documented through evaluation of objective data.

B4. Interstate Reciprocity for Technology Acceptance Stakeholder Input/Public Comment Process

The final report or evaluation should be available for public comment within the host state prior to submittal to the Interstate Reciprocity for Technology Acceptance pathway. This should, at minimum, consist of publishing a notice in the state register, which indicates that the report is available and summarizes the finding, concluding, impacts, benefits and controls. In some cases the host state may choose to public notice the initial approval or acceptance of the environmental technology for a pilot or demonstration as applicable within the state. In addition the report or evaluation should be available for peer review and publication in a scientific and/or technical journal.